

and a high contrast. The liquid crystal layer is interposed between a pair of polarizing layers with the polarizing layer on the observer side separated into a reflected light and a transmitted light. The light incident on the other polarizing layer is partially transmitted with the remaining part being absorbed. This permits the reflected light from the other polarizing layer to be removed to avoid a reduction in contrast. The reflected light coming from the one polarizing layer has a roughly flat spectral characteristic as noted in Figure 6 and in column 7. The chroma of the light guide plate which is the upper polarizing plate, is evaluated by means of CIE[L*a*b*] and in determining chroma a psychometric lightness L^* represents the brightness while the chromaticness indices a^* and b^* represents the chroma.

This, however, is not an invention of the *Moriwaki et al.* reference, but rather represents a standardized procedure for evaluating whether any coloring will occur in the light reflected on the upper polarizing plate and the light transmitted through the upper polarizing plate.

The Office Action specifically noted the equation in column (10) lines 53-54 and contended that this equation was in the same form as the equation of the present invention set forth in Claim 1. It is believed that the Office Action actually intends column 9 Equation 4.

Equation 4, however, specifically includes a value of psychometric lightness L^* in an equation that combines the square value of the lightness and the chroma values added together and that total value is taken as a square root and subtracted from 100.

Referring, for example, to Claim 1, we calculate the whiteness W from the chroma C not only by a method defined by the Cie 1997 Interim Color Appearance Model, but also with regards to coefficients "a" of a negative real number and "b" of a positive real number. Our equation does not include a psychometric lightness L^* as a parameter, and there is no suggestion that an equation representative of a straight line can be equated to the *Moriwaki et al.* equation

(4) found on column 9, line 55, with a psychometric lightness. Needless to say, the other features found in the dependent Claims 2-6 are also not taught in the *Moriwaki et al.* disclosure. Even the constrained contention that L could be equal to 100 when the chroma is zero is not supported by the values set forth respectively in columns 10 and 11 of the *Moriwaki et al.* reference.

The invention defined in Claims 1-6 resulted from empirical work performed by the present inventors by the performance of subjective evaluation tests on three kinds of whiteness that were deemed to be most useful in designing a lighting device, that is, whiteness when a light source is in a direct vision, whiteness when a most white object in the daily life is viewed, and whiteness when a newspaper or magazine, which is often viewed in daily life, is viewed. The coefficients "a" and "b" were determined and derived including the determination of a straight-line characteristic as can be seen from Figure 3 of our present invention.

The present invention is not concerned with the consequences of polarizing plates with reflecting silver surfaces, and the cited equation is not representative of the Claim 1 equation and its derivation empirically in our present invention, nor does our equation include a psychometric Lightness* as required in the *Moriwai et al.* equation. To measure or calculate chroma using the *Moriwaki et al.* equation (4), the psychometric Lightness* has to be measured. With our present invention, it is possible to calculate the whiteness W only with a chroma (C) being measured, and we accordingly have an advantageous effect not possible in the *Moriwaki et al.* disclosure.

In summary, not only do we address different issues than that of a liquid crystal display device, but our solution as defined in our claims is neither anticipated nor suggested by the *Moriwaki et al.* reference.

The Office Action further rejected Claims 1 and 4-6 over the *Ikeda et al.*, U.S. Patent No. 5,071,727. Again, the Office Action maintained that the equation on column 10, lines 20-21 of the *Ikeda et al.* disclosure was the same form of equation as the present invention and that it would be merely a question of design choice to choose the specific coefficients a and b.

The *Ikeda et al.* reference is directed to a copier toner for use in electrostatic recording and more particularly attempts to address a problem of charge controlling agents that are added to the toner to improve performance, but can create an obstacle to the formation of bright chromatic colors. See column 2, lines 32-33. The solution to this problem, alleged by the *Ikeda et al.* disclosure, is to provide a distribution of a stable amount of a turboelectric charge through friction between toner particles. As can be determined from the claims in the *Ikeda et al.* invention, the provision of a nitrogen-containing organic compound with 14 or more carbon atoms, and an aryl group, organic phosphino compounds also with 14 or more carbon atoms is provided. The Office Action, however, relied upon the equation on column 10, line 7, that refers to the square root of the sum of the squares with a variable Chroma (C) and a Value (V) using three attributes of color.

In determining the whiteness from this standard equation quoted in column 10, *Ikeda et al.* suggests taking an amount of the toner sample in a transparent plastic bag and then placing standard color chips also in a transparent plastic bag. See column 10, lines 13-25.

Our present equation does not include a Value (V) as a parameter and accordingly it is not appropriate to equate our equation, as set forth in Claim 1 with the equation of *Ikeda et al.* taught on column 10, line 7. We are addressing a different problem from the problem of an improved toner, and a person of ordinary skill in this field would not attempt to derive our equation from the *Ikeda et al.* disclosure. It is not possible to prove the validity of our equation

only based on the *Ikeda* equation. We can calculate the whiteness without the Value (V) of the positively chargeable compound.

Additionally, applicants traverse the Office Action's contention that it would be an obvious matter of design choice to choose the coefficients a and b as set forth in our dependent Claims 4-6. These coefficients were based upon a subjective evaluation test and are not merely issues of design choice. By utilizing our equation, it is possible to objectively and accurately calculate different types of whiteness without requiring the performance of additional subjective evaluation tests.

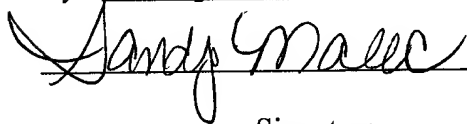
In view of the above comments, it is believed that the present claims are allowable, and an early notification of allowance is requested. If the Examiner believes that a telephone interview will help further prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on March 17, 2003.

Very truly yours,

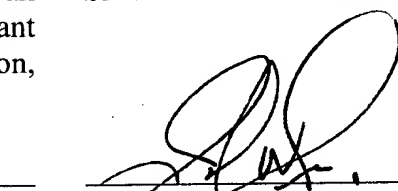
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Signature

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